Fuel Transfer Pump Kits

User's Manual

⚠ WARNING: Read carefully and understand all INSTRUCTIONS before operating. Failure to follow the safety rules and other basic safety precautions may result in serious personal injury.

Model No.

10305601, 10307202, 10308001, 10305602, 10307203, 10308002, 10306602, 10308202, 10306603, 10308203, 10305627, 10305628, 10307006

A. DECLARATION OF CONFORMITY

DECLARATION OF CONFORMITY

IN ACCORDANCE WITH THE DIRECTIVES：
89/392/CEE - 91/368/CEE - 93/44/CEE – 89/336/CEE – 92/31/CEE
THE MANUFACTURER：

INTRADIN (SHANGHAI) MACHINERY
118 DUHUI ROAD, MINHANG DISTRICT, SHANGHAI, 201109 CHINA

DECLARES THAT THE FOLLOWING PUMP MODELS:
10305601, 10307202, 10308001, 10305602, 10307203, 10308002, 10306602, 10308202, 10306603, 10308203, 10305627, 10305628, 10307006
To which this declaration refers, conform to the following applicable regulations:
EUROPEAN REGULATIONS:
EN292-1-92 – Safety of Machinery – General Concepts, basic principles for design – terminology, basic methodology
EN292-2-92 – Safety of Machinery – General Concepts, basic principles for design – specifications and technical principles
EN294-93 – Safety of Machinery – safe distances to prevent the operator’s upper limbs from reaching dangerous areas
EN60034-1-2000 – Rotating electrical Machinery – nominal and functional specifications
EN60034-5-2001 – Classification of grades of protection for the housings of rotating electrical machinery
EN61000-6-3 – Electro – magnetic compatibility – generic emission standards
EN61000-6-1 – Electro – magnetic compatibility – generic immunity standards
EN55014-1-00(A1/99-A2/99) limits and methods for measuring radio disturbance characteristics
EN55014-2-97 – Electrical motor – operated and thermal appliances for household and similar purposes, electric tools and similar electrical apparatus
EN60204-1-98 –safety of machinery – electrical equipment of machines

B. INTRODUCTION

The diesel transfer pump kits have been designed for the delivery of diesel or kerosene from an open surface tank. This manual, apart from giving all necessary information on ordinary maintenance and supporting engineers in failure detection and repair, should also give all the information’s needed to fully employ the capacity of the machine, as well as to the user’s needs.

C. INSTALLATION

Electric connection should be done on a CEI standard socket provided with switch (so it isn’t live when the connection is done) according to L.46/90 prescriptions.

PRELIMINARY INSPECTIONS
Before the power connection is done, verify the conductors aren’t live and general switches are off.

DISMANTLING AND DISPOSAL PROCEDURE

The metallic parts which the machine is mainly made of will be dismantled and sent to the steel mills. The fuels in the tanks of the installation will be collected and sent to an authorized disposer. All plastic and non-degradable material parts will be separately collected and sent to an authorized disposer or recycled.

SAFETY DEVICES

- **General Switch**

It is placed on the motor body and allows the operator to set it on standby in a very short time. Once the machine is stopped, the whole starting procedure can be repeated.

- **Mechanical Protections**

They are metal protections meant to prevent access to mechanical moving parts, high-temperature parts and live electric parts.

- **Harmful Functions**

The noise from the machine is below 70 dB (A).

- **FIRE PREVENTION**

In case of fire never use water, but extinguishing powders charged with CO2 cat. A-B-C-D only, employing the extinguishers placed next to the machine. Combustion of paints and plastic parts may produce toxic emissions (always refer to the security supervisor of the place of installation).

- **FOR DC PUMPS**

ATTENTION！

1. Extreme operating conditions with working cycles longer than 30 minutes can cause the motor temperature to rise, thus damaging the motor itself.
2. Each 30-minute working cycle should always be followed by a 30-minute power-off cooling phase.
3. MAXIMUM BY-PASSING TIME: 3 MINUTES.
4. DO NOT RUN DRY OVER 30 SECONDS.

NOTICE: THE VISION IS BUILT PAYING MAXIMUM CARE TO USER'S AND MAINTENANCE ENGINEER'S SECURITY.

D. TECHNICAL DATA

MODEL	Flow Rate	Model of Meter	ELECTRICAL POWER		
			Current	Voltage(V)	Power
10305601	56LPM/15GPM	15111200	AC	230V	370W
10307202	72LPM/19GPM	15111200	AC	230V	450w
10308001	80LPM/22GPM	15111200	AC	230V	450w
10306602	66LPM/18GPM	15111200	AC	120V	370W
10308202	80LPM/22GPM	15111200	AC	120V	450w
10305602	56LPM/15GPM	Not included	AC	230V	370W
10307203	72LPM/19GPM	Not included	AC	230V	450w
10308002	80LPM/22GPM	Not included	AC	230V	450w
10306603	66LPM/18GPM	Not included	AC	120V	450w

10308203	80LPM/22GPM	Not included	AC	120V	370W
10305627	56LPM/15GPM	Not included	DC	12V	/
10305628	56LPM/15GPM	Not included	DC	24V	/
10307006	35/70LPM 9/18PM	Not included	DC	12/24V	/

E. PRECAUTIONS

During Diesel delivery always wear fuel resistant gloves and always wash hands with water and soap at the end. **Always clean** at once fuel stains to avoid slips and/or pollution.
Use particular care with the zones next to the controls.
When cleaning, and specially when removing dust or waste, always wear suitable clothes, if possible use aspirators only. Always use suitable clothes or protective devices. Never place hands or limbs under moving parts.

F. SYSTEM DESCRIPTION

Functional Description
The diesel transfer system are hydraulic machine tools which feed with a given capacity (volume) of fluid in the time unit, a collecting tank, sucking the liquid from an open surface feed tank; the allowed suction lift (geodetic suction lift Hga) is also a specific characteristic of the pump. The system is composed by complementary equipment, operating as whole to give a complete service:

- Feeding pump
- Volumetric flow meter (Optional)
- Suction filter
- 4M (13.5ft.) Delivery rubber hose
- Manual dispensing nozzle

MACHINE DESCRIPTION
The diesel transfer unit has been designed and built according to the following standards:

- Electric requirements: EN 60204-1 and EN 60529
- Mechanical requirements: EN 292-1 and EN 292-2; EN 55081-2, EN 55011C/A
- Other requirements 89/392 CEE

G. ALLOWED AND FORBIDDEN USE

This fuel transfer unit has been designed and built for DIESEL & KEROSENE TRANSFER ONLY from reservoirs, tanks and drums.
It is strictly forbidden to employ it to transfer liquids of different kind as gasoline, explosives and corrosives (or flammable), alimentary liquids.
The machine isn't designed for employment in the explosive environment.
Operating the pump is forbidden to children and disabled person.
It is forbidden to employ the unit next to flammable liquids (gasoline, alcohol, etc.).
It is forbidden the employment in closed environments in presence of gasoline, LPG, methane fuelled vehicles.

H. TRANSPORT AND UNPACKING

Due to its weight and dimensions, the unit can easily be transported by hand. Control that the package is good conditions and verify that the unit isn't damaged. Each failure must be noticed in 10 days from receiving the machine.

For correct unpacking carefully follow these instructions:

1. Place the case on the ground following the indications on the package.
2. Carefully open the case, remove the machine and place it on the ground or on a steady surface.
3. Control that the machine and its accessories aren't damaged.
4. Fasten the panel, placing it on the ground or on a steady surface capable of carrying the pump, in a repaired environment with a temperature between +40℃ and -20℃ well lit and ventilated. For a better employment the unit should be placed as near as possible to level of liquid to be pumped. (Max. distance 2m)
5. Screw the delivery hose on the fitting of the flow meter and of the filling gun.
6. We suggest using a diesel oil resistant rubber or plastic suction hose; spiral shaped, with minimum as 1" internal diameter, the same as the union. The hose must be sealed to avoid oil leaks. In case a 4M/13.5ft. or longer hose is employed we suggest to use the foot valve with filter.

I. USE AND STARTING

POWER GRID ELECTRICAL CONNECTION

The plant must be provided with a safety device of 30mA minimum Din standard. The plug must be connected to an earthed SHUKO socket. It is forbidden to cut or replace the provided plug.

STARTING

Once the hoses are sealed, the feeding cable is connected and the filling gun is in rest position, the machine can be started. After placing the hose into the tank and the gun into the filling hole, start the pump, gradually release the lever and start Diesel oil transfer. Once the filling is done release the control of the gun and switch the pump off. When the pump isn't in use disconnect it.

FLOW METER (Optional)

The follow meter shows how many litres of liquid were pumped by the unit. Be aware that this device is not suitable to measure products for resale.

The mechanical flow meters indicate the partial (resettable) and total (no reset function) of the litres pumped. Each time the instrument must be reset, turn the knob on the left of the unit until all zeroes are displayed.

Calibration

The meter used in the pumping unit is calibrated at the factory. Calibration is recommended upon initial use, after disassembly or significant wear. Meter calibration can be easily changed with the procedure hereafter. The proving container should be at least 50 litre / 13 gallon.

Procedure:

Fill container to a know volume

Turn the calibration screw

+Clockwise to increase the number of liters counted

-Counterclockwise to decrease the number of liters counted

⚠ WARNINGS

1. The gunlock has been provided to make filling easier. It is forbidden to leave the gun unattended to avoid oil overflow.
2. Don't operate the machine if there is no liquid inside. Don't start the pump before connecting suction and delivery hoses.
3. Once the gun is closed, switch the motor pump off as soon as possible. THE PUMP HAS TO WORK IN BY-PASS CONDITION FOR SHORT PERIOD: MAXIMUM 3 MINUTES.
4. In case of current losses the pump should be switched off and the plug disconnected.
5. It is strictly forbidden to use the pump with wet hands, barefooted or dipped in water.
6. In case of blackout switch the pump off and disconnect the plug to avoid unexpected starts with liquid overflow.
7. When transferring from open-air tanks, we suggest to place the machine as far as possible to avoid sprays and sudden dips which may cause serious damage.

J. MAINTENANCE

Each kind of disassembly should always be carried out when the machine is stopped, the plug is disconnected and after emptying the pump and the flow meter. For a better operation control every three months that there isn't any kind of debris in the flow meter filter.

K. OPERATIONAL PROBLEMS

ACCIDENTS	CAUSES	REMEDIES
The pump doesn't work	A) Jammed shaft B) No electric feeding	A) Disconnected the plug; unscrew on the pump, remove the pump body and clean it inside. Control that the shaft is now working correctly. Reassemble the pump. B) Control that the plug is correctly connected and that the socket is live.
The pump works doesn't deliver liquid.	The pump sucks air from the suction hose.	Control the suction hose seal on the pump. Verify that the hose is completely immersed into the liquid and free from chokes. Control that the filter is clean. Remember that the pump can suck up to 4 meters.
The pump works but the flow meter doesn't measure	Dirt inside the flow meter chamber	Disconnected the plug. Using the flow meter exploded view as a guide disassembles the faceplate and the assembly support. Open the chamber and carefully clean the revolving disk. Reassemble.

L. MECHANICAL RISKS

1. Mechanical parts subject to wear

The blades
The bearing
The rotor

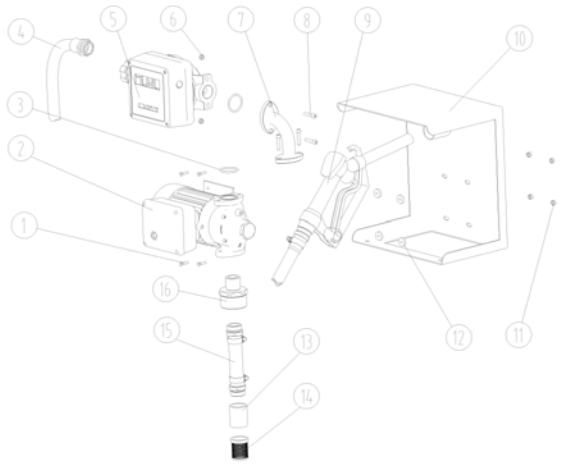
These parts should be replaced with original spare parts by qualified personal only or in authorized service centres.

Risks due to extreme temperatures
Remember that a very low temperature can freeze the Diesel oil inside the pump. This situation can cause serious damage to the motor pump unit.

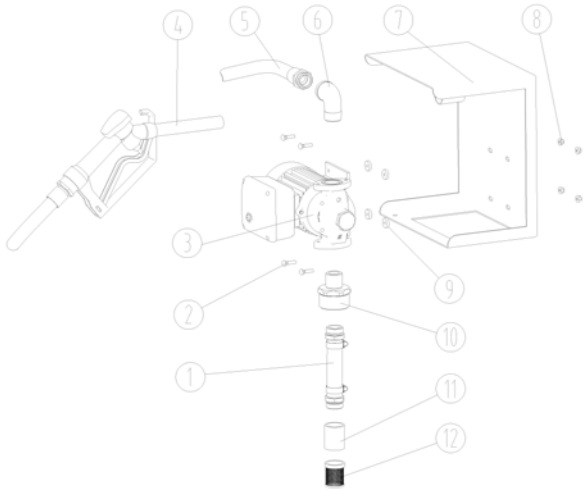
A very high temperature (about 45℃) may cause the plastic parts in the unit to expand. The unit should thus be placed in a well-ventilated place and protected from the sun.

M. DIAGRAM

Units with meter



Units without meter



N. PARTS LIST

Units with meter

Part No.	Component description	Quantity
1	Screw M6	4
2	Fuel transfer pump	1
3	O-ring	1
4	Outlet	1

5	Mechanical Meter	1
6	Screw M8	2
7	Elbow	1
8	Screw M8	4
9	Manual Nozzle	1
10	Housing	1
11	Screw M6	4
12	Washer	4
13	Valve	1
14	Filter	1
15	Inlet	1
16	Fitting	1

Unit without meter

Part No.	Component description	Quantity
1	Inlet	1
2	Screw M6	4
3	Fuel transfer pump	1
4	Manual Nozzle	1
5	Outlet	4
6	Elbow	1
7	Housing	1
8	Screw M6	4
9	Washer	4
10	Fitting	1
11	Valve	1
12	Filter	1